

FIG.2

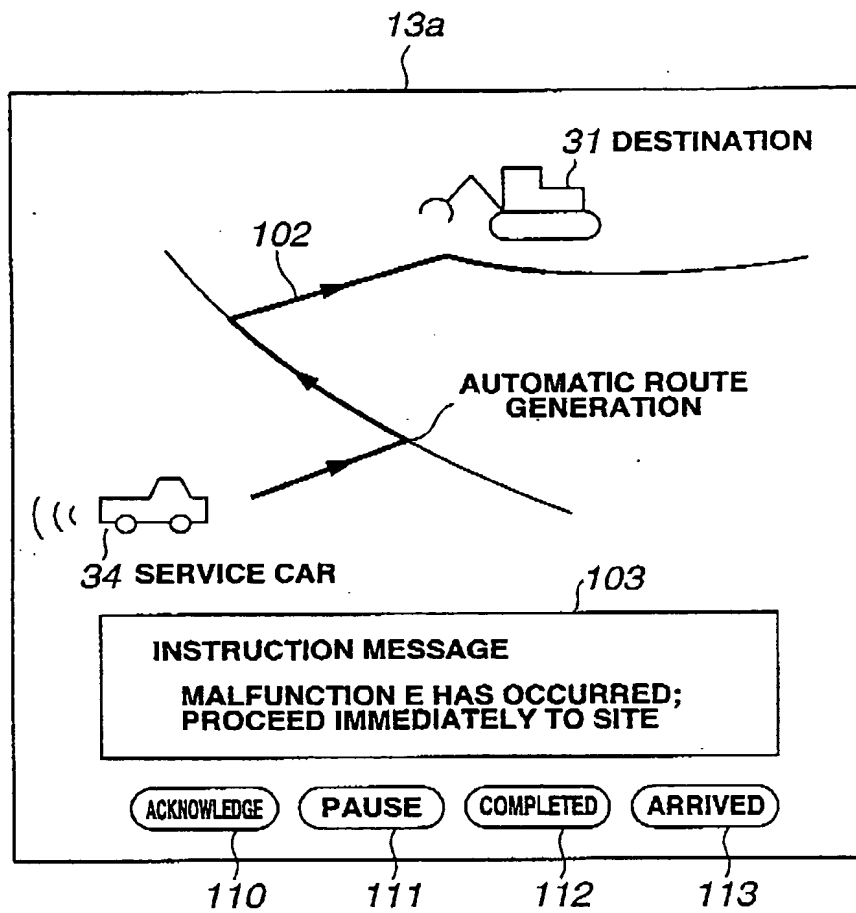


FIG.3

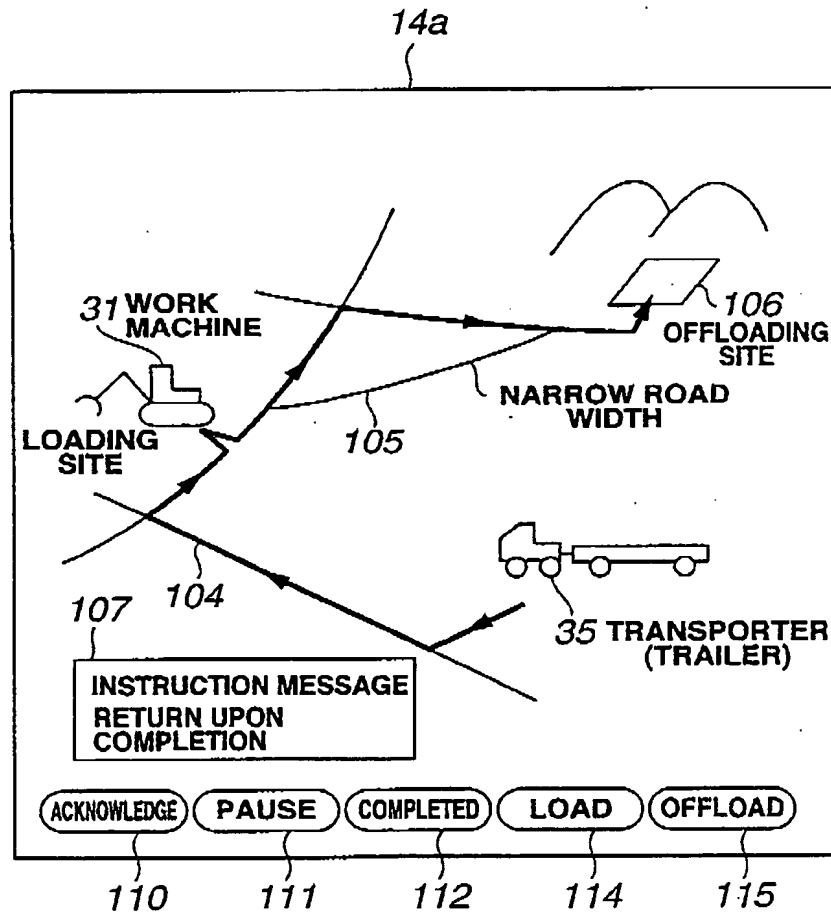


FIG.4

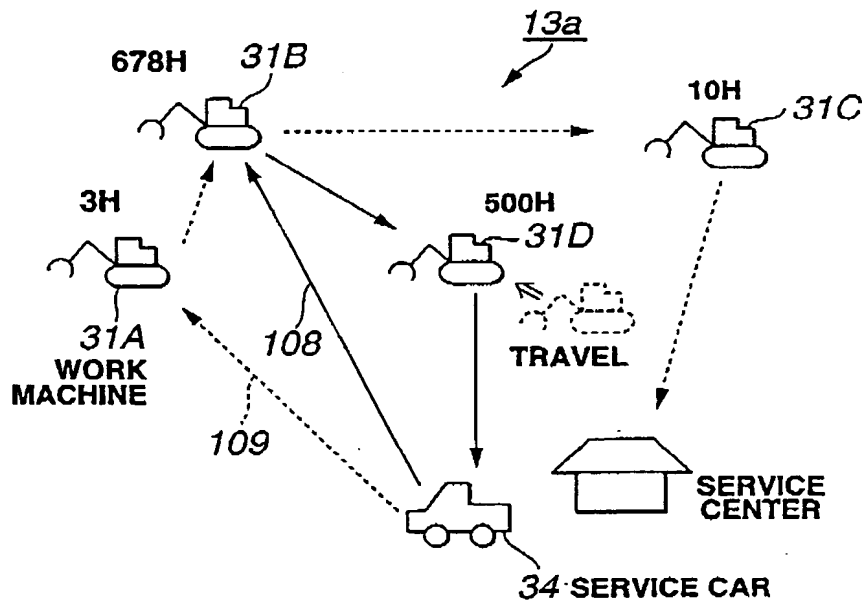


FIG. 5

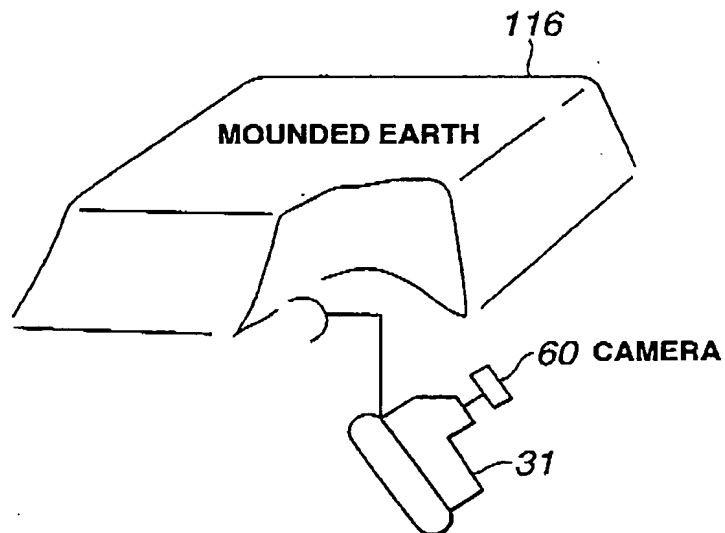
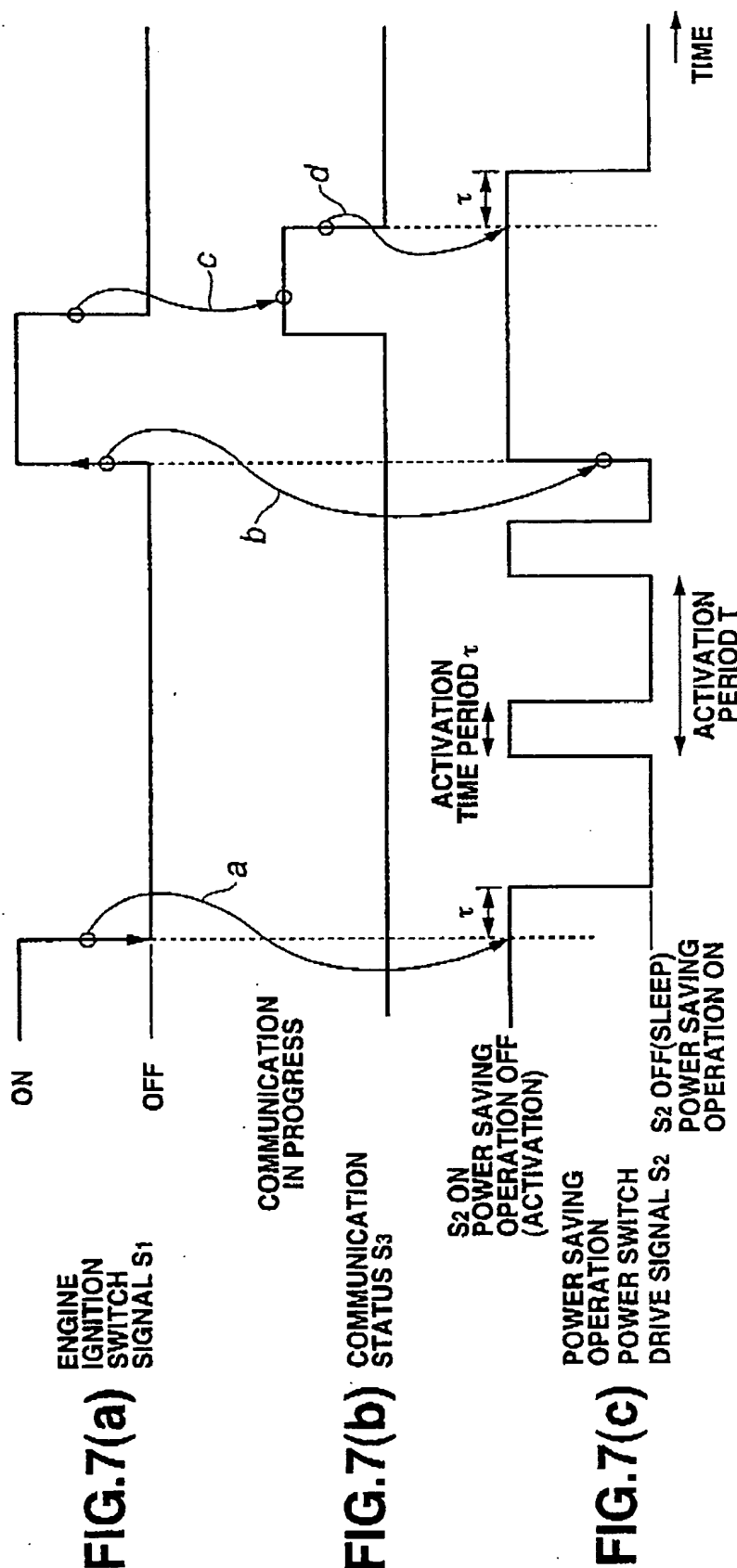


FIG. 6



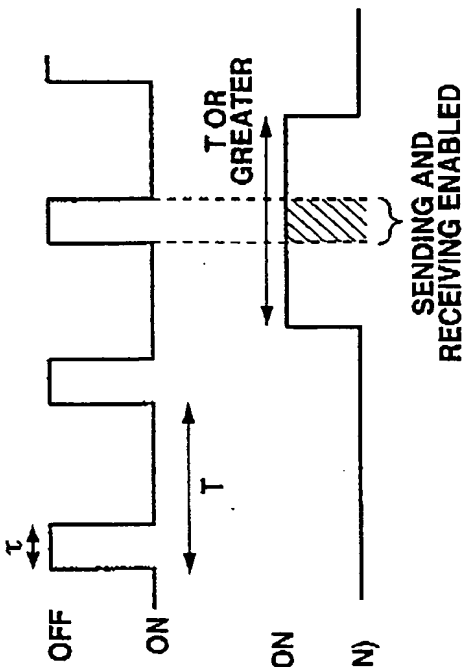


FIG. 8(b)

FIG. 8(c)

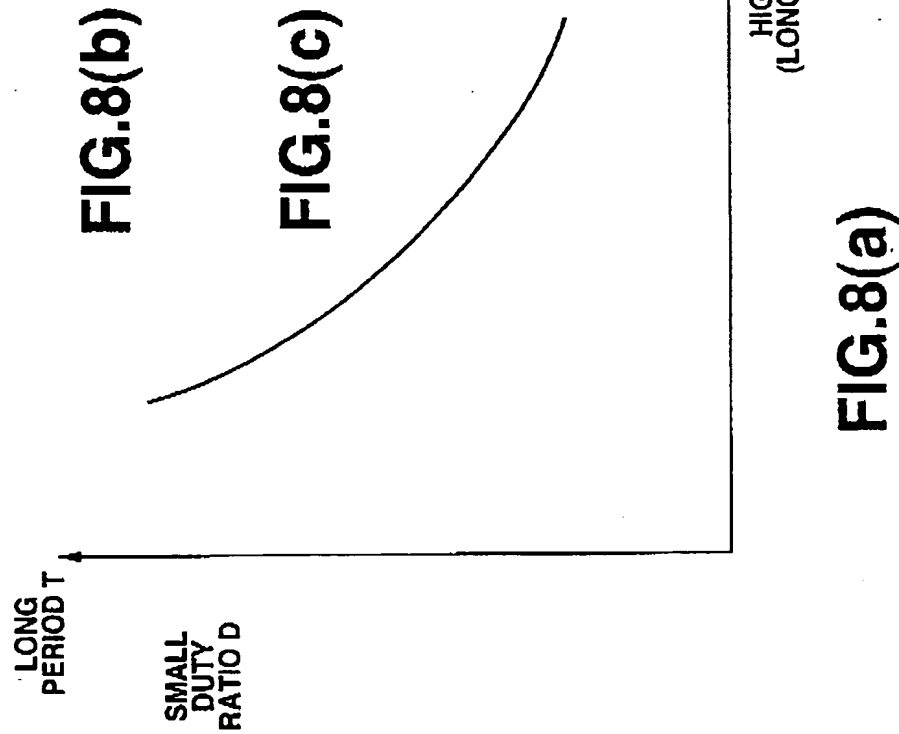
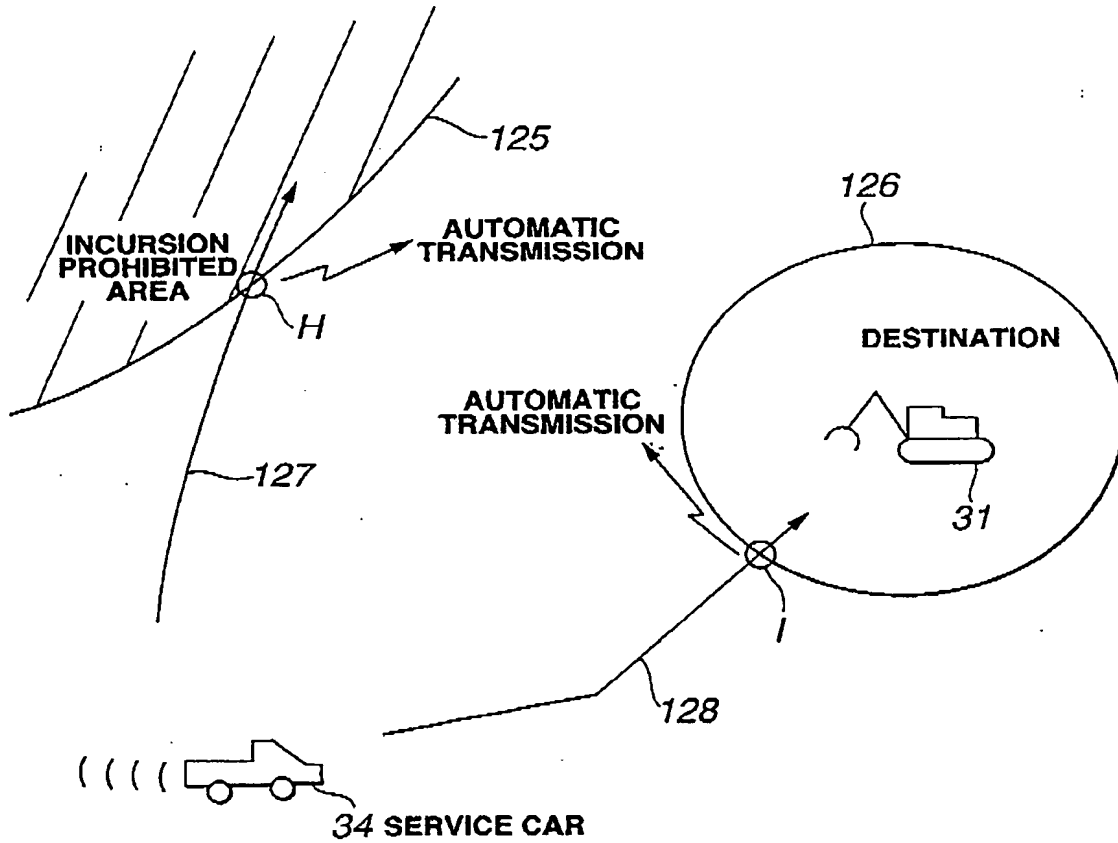


FIG. 8(a)

**FIG.9**

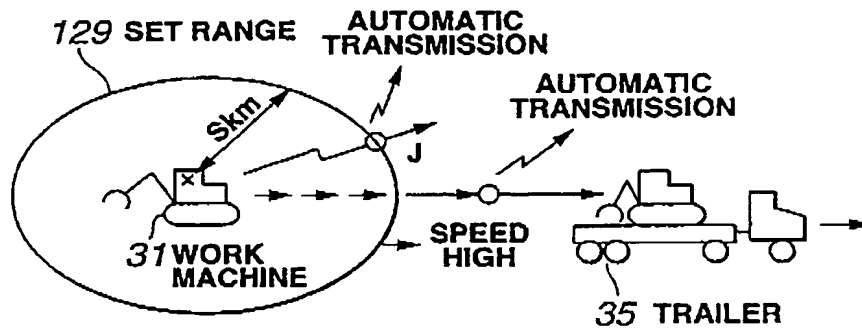


FIG. 10

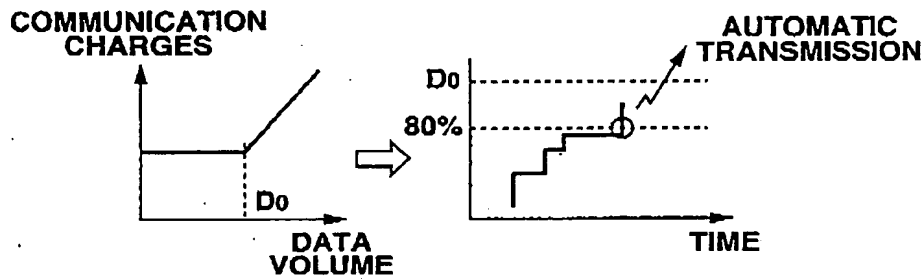


FIG. 11(a)

FIG. 11(b)

FIG. 12(a)

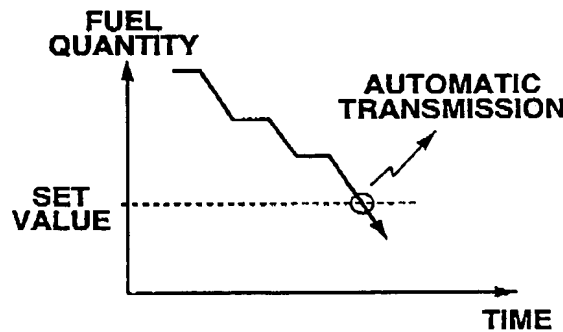
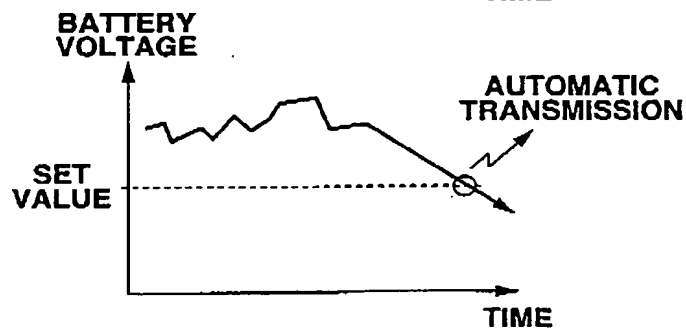


FIG. 12(b)



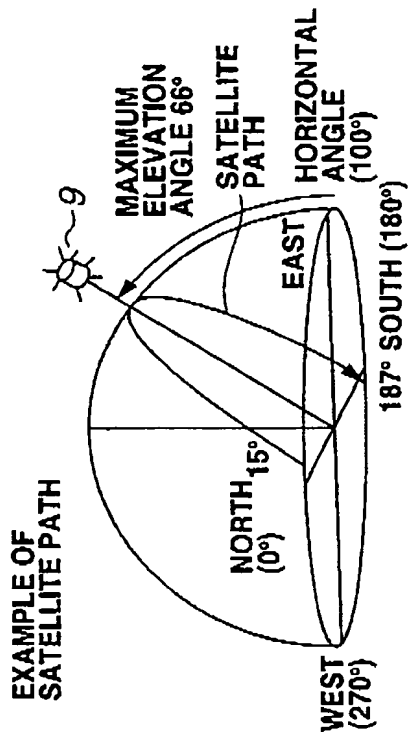


FIG.13(c)

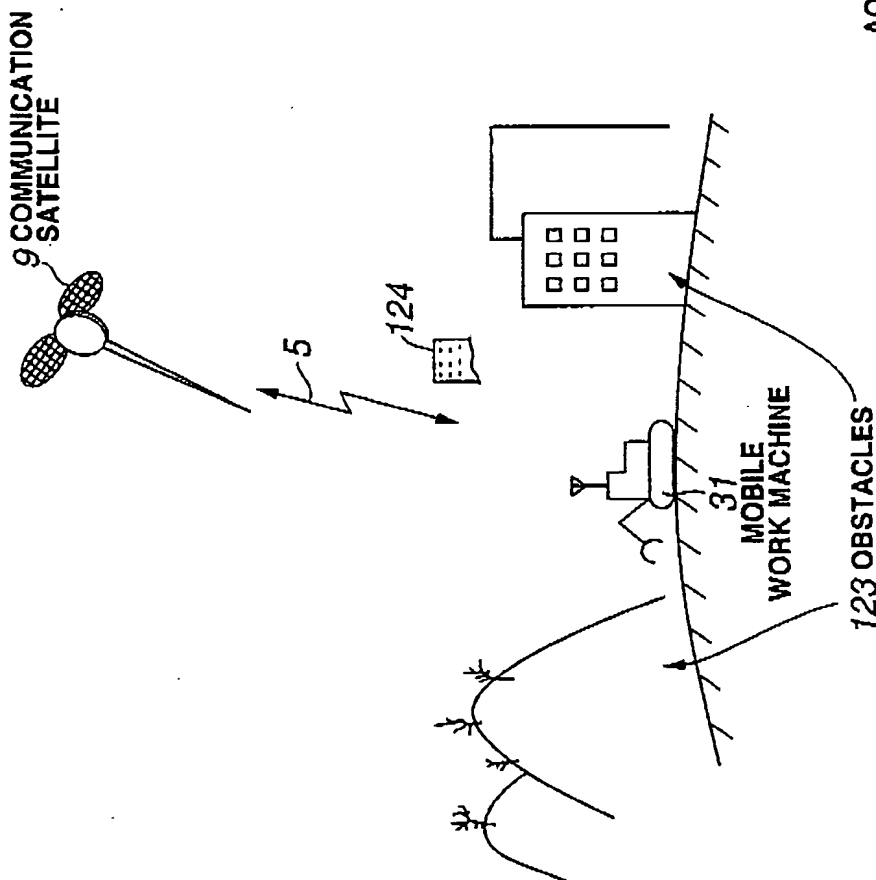
DATE	TIME				AZIMUTH ANGLE				MAXIMUM ELEVATION ANGLE			
	AOS	MEL	LOS	MEL	AOS	MEL	LOS	MEL	AOS	MEL	LOS	MEL
24Aug98	0244	0247	0251		59	66	116	3				
(MON)	0426	0433	0441		15	100	187	66				
	0613	1618	1624		345	297	246	12				
	1435	1443	1451		128	62	2	24				
	1619	1628	1636		179	265	341	54				
	1808	1814	1819		239	276	306	4				

AOS TIME AND AZIMUTH AT WHICH SATELLITE APPEARS ON HORIZON

LOS TIME AND AZIMUTH AT WHICH SATELLITE DISAPPEARS BELOW HORIZON

MEL TIME AND AZIMUTH AT MAXIMUM ELEVATION ANGLE

FIG.13(b)



ACTIVATION BASED ON SATELLITE ORBITAL INFORMATION

FIG.13(a)

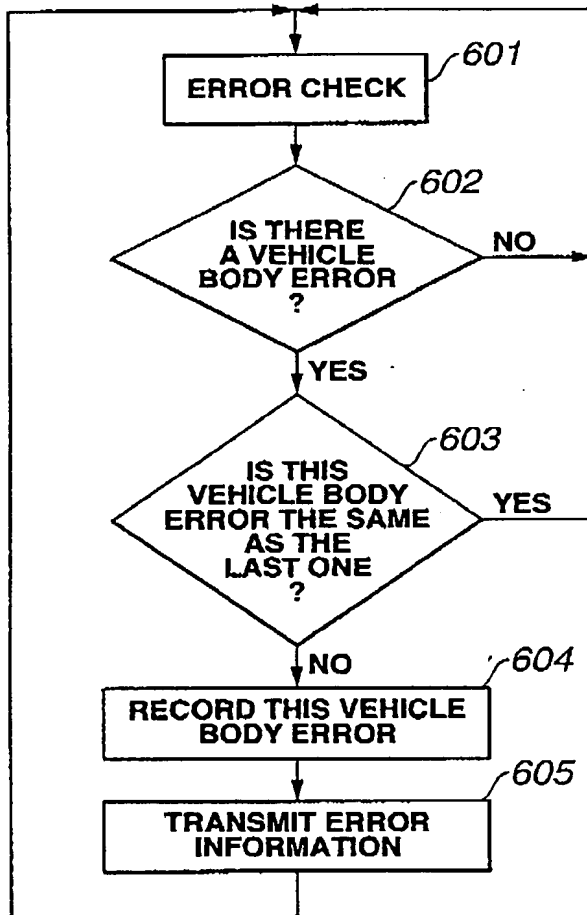


FIG.14

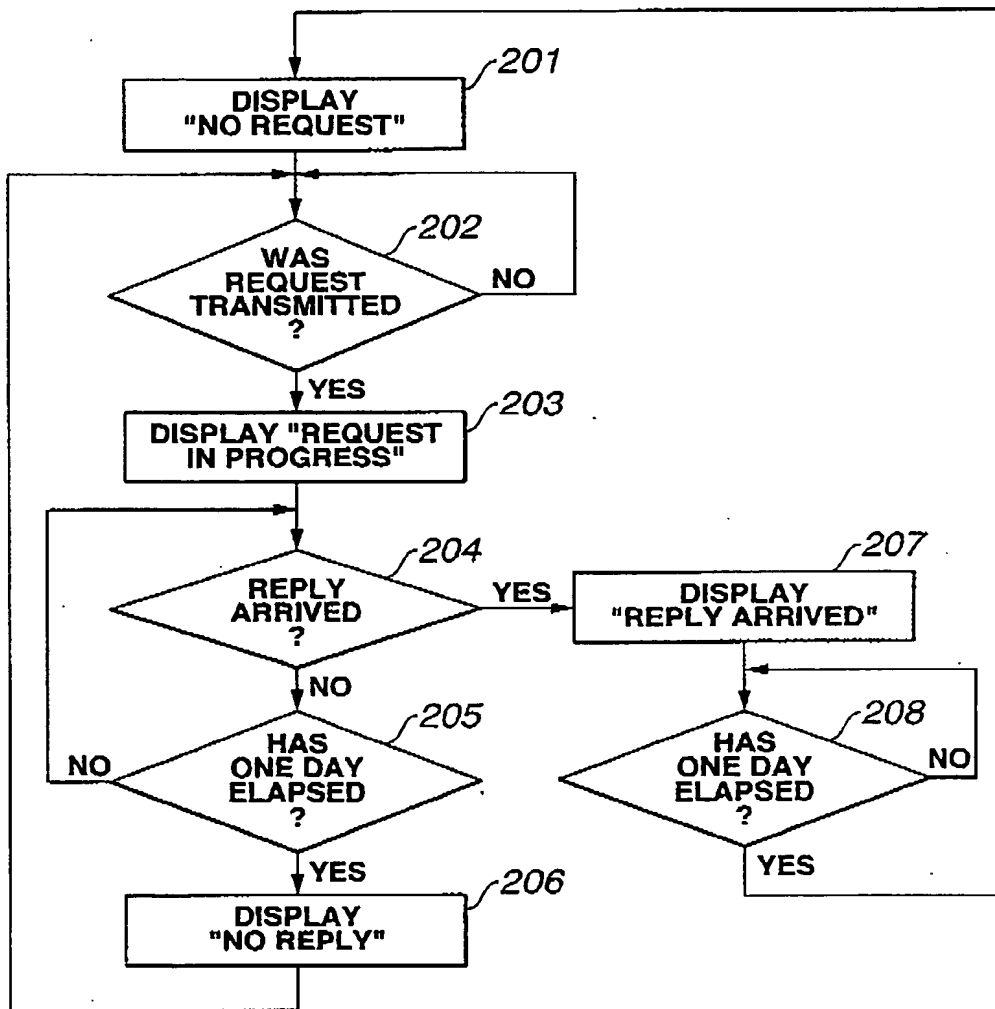


FIG.15










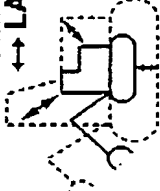




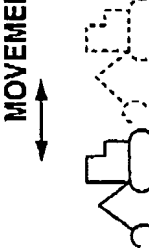
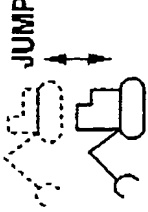
	NO REQUEST	REQUEST IN PROGRESS	REPLY ARRIVED	NO REPLY
COLOR (PATTERN)	 BLUE	 YELLOW	 GREEN	 RED
SHAPE				
SIZE	 MEDIUM	 MEDIUM ↔ LARGE	 LARGE	 SMALL
CHANGE		 ROTATION	 MOVEMENT	 JUMP

FIG. 16(a)

FIG. 16(b)

FIG. 16(c)

FIG. 16(d)

33	COMMUNICATION STATUS	VEHICLE NUMBER	POSITION	SERVICE METER
	BLUE	23	TOWN A	405H
31	YELLOW	102	CITY B	120H
36	BLUE	117	TOWN C	97H
37	BLUE	233	CITY D	381H
32	YELLOW	234	TOWN E	39H

31	COMMUNICATION STATUS	VEHICLE NUMBER	POSITION	SERVICE METER
	YELLOW	102	CITY B	120H
32	YELLOW	234	TOWN E	39H
33	BLUE	23	TOWN A	405H
36	BLUE	117	TOWN C	97H
37	BLUE	233	CITY D	381H

REARRANGE
ACCORDING TO
COMMUNICATION
STATUS



FIG. 17(a)

FIG. 17(b)

EXTRACT



31	COMMUNICATION STATUS	VEHICLE NUMBER	POSITION	SERVICE METER
	YELLOW	102	CITY B	120H
32	YELLOW	234	TOWN E	39H

FIG. 17(c)

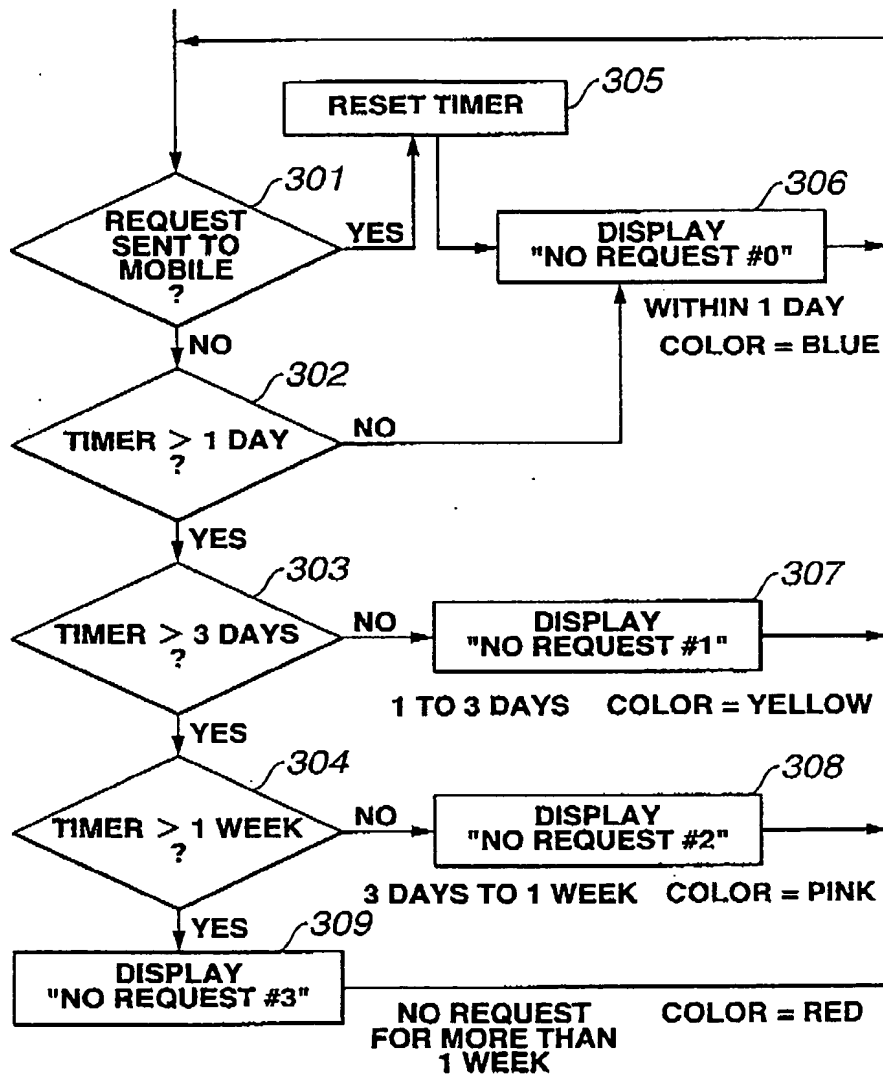


FIG.18

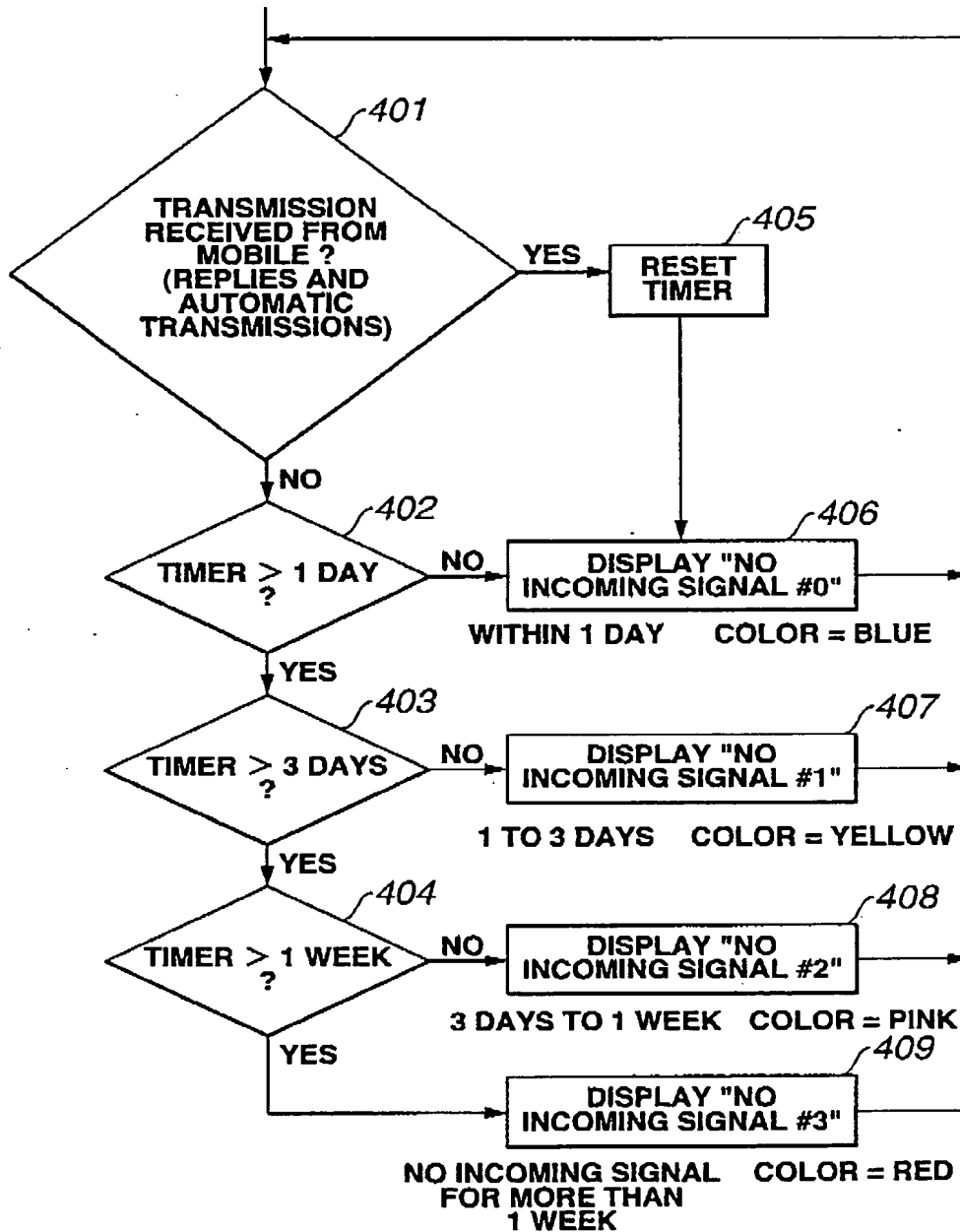


FIG.19

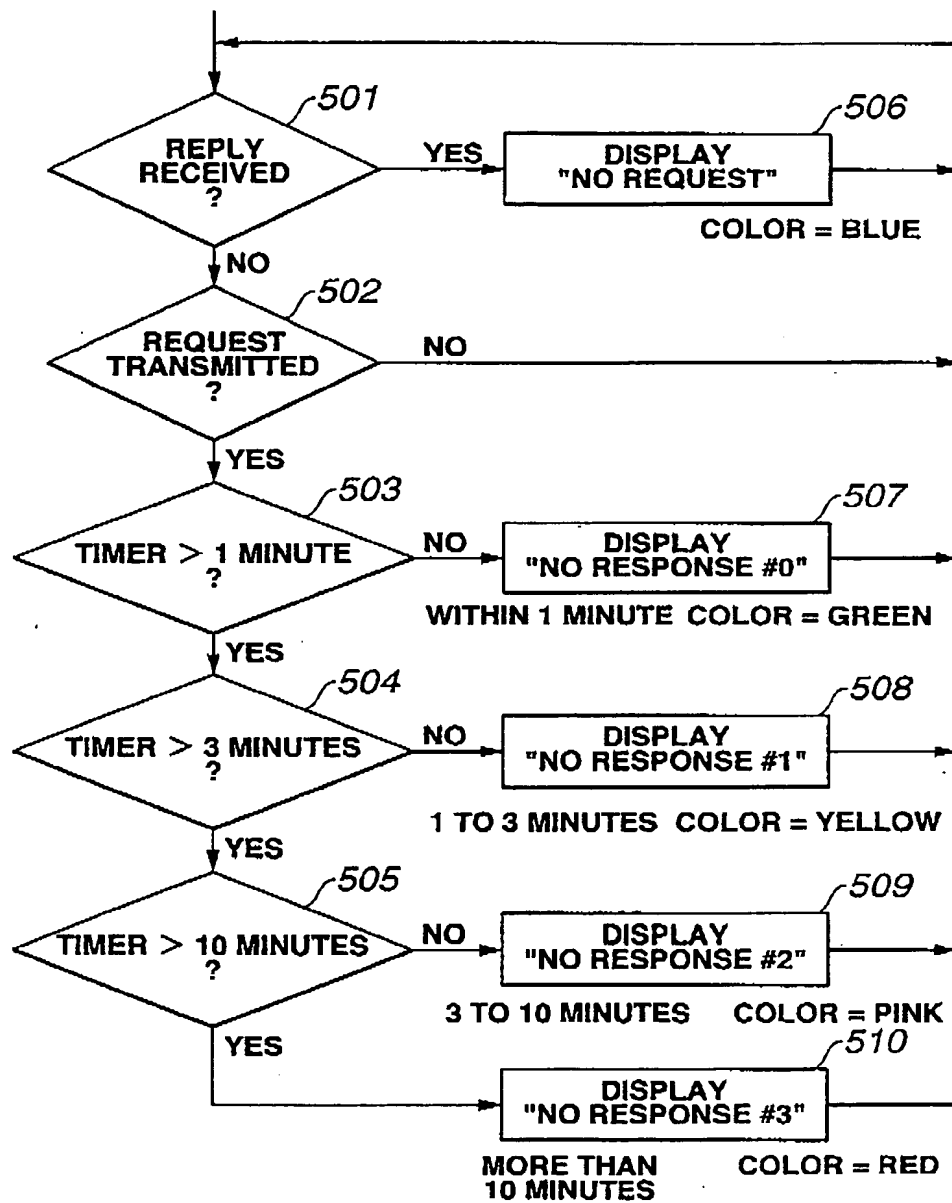


FIG.20

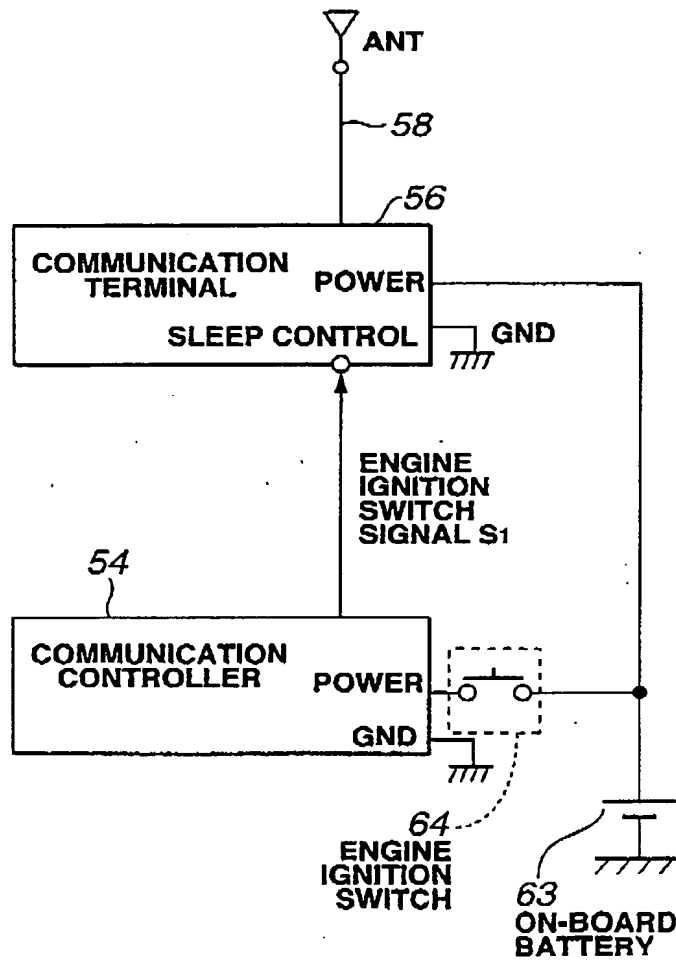
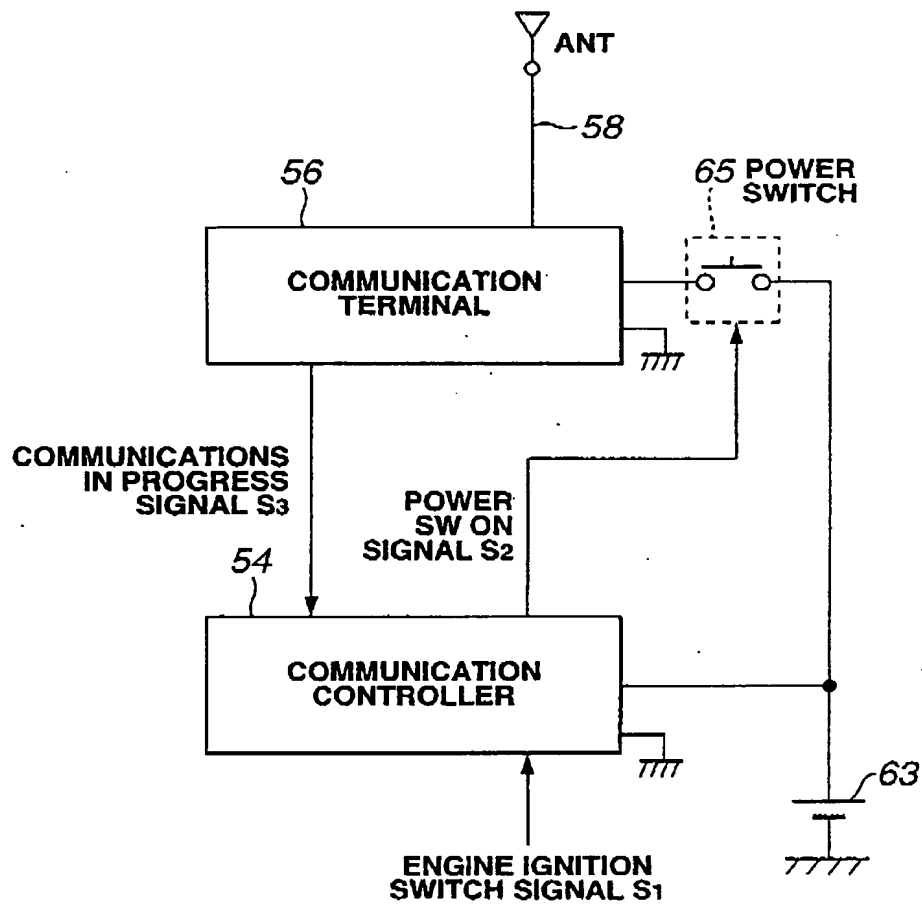


FIG.21

09/936484.120601

**FIG.22**

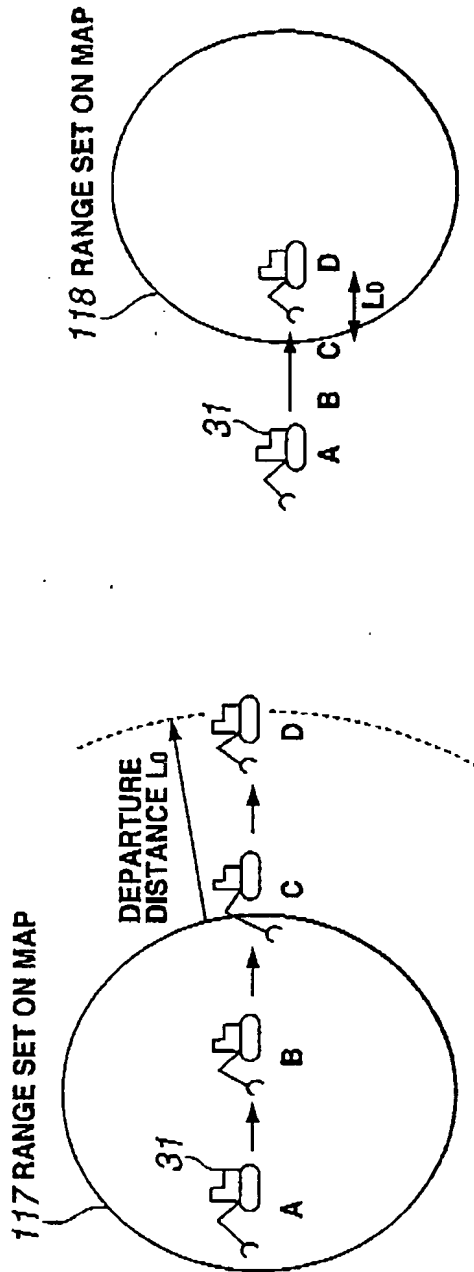


FIG. 23(a)

FIG. 23(b)

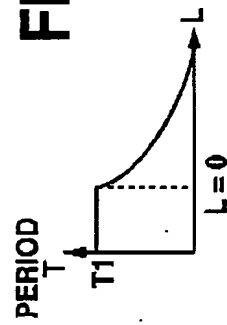


FIG. 23(c)

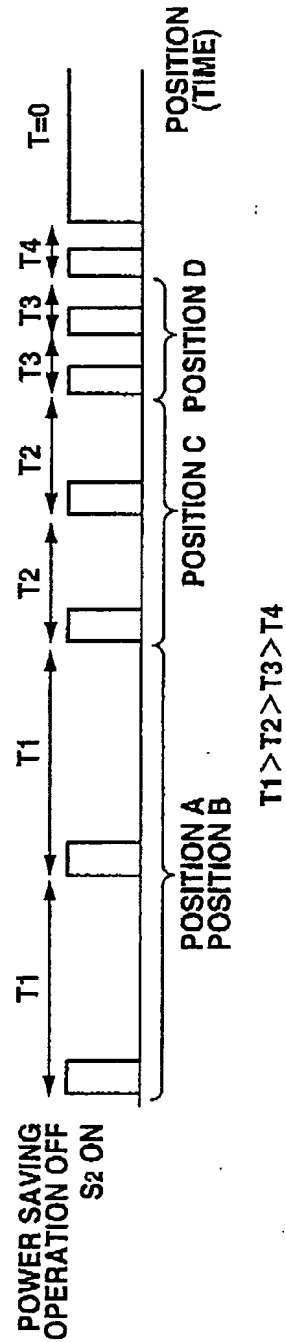


FIG. 23(d)

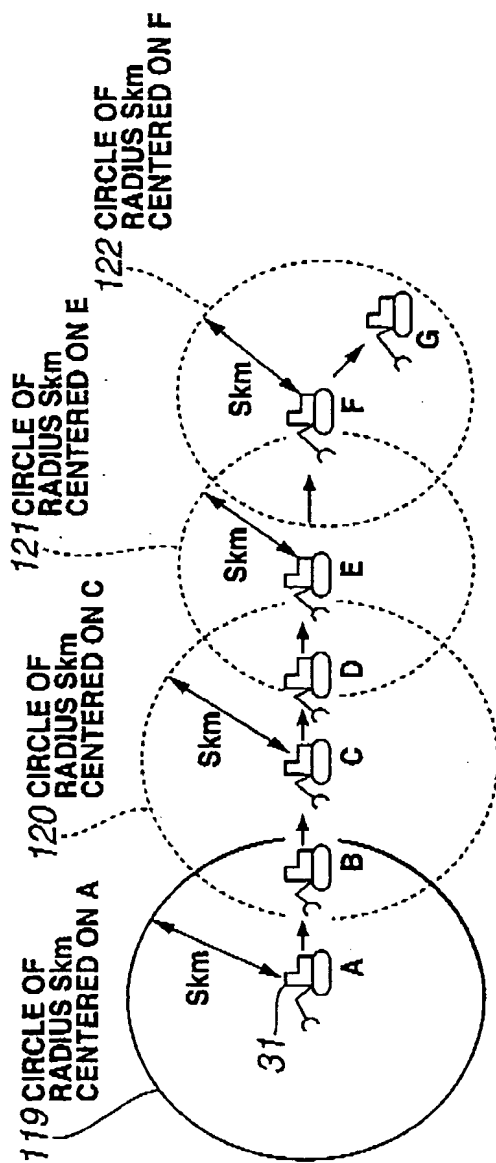
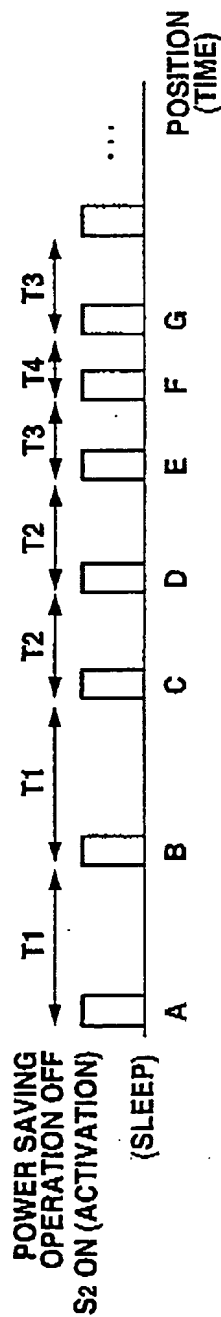


FIG. 24(a)



$$T1 > T2 > T3 > T4$$

FIG. 24(b)

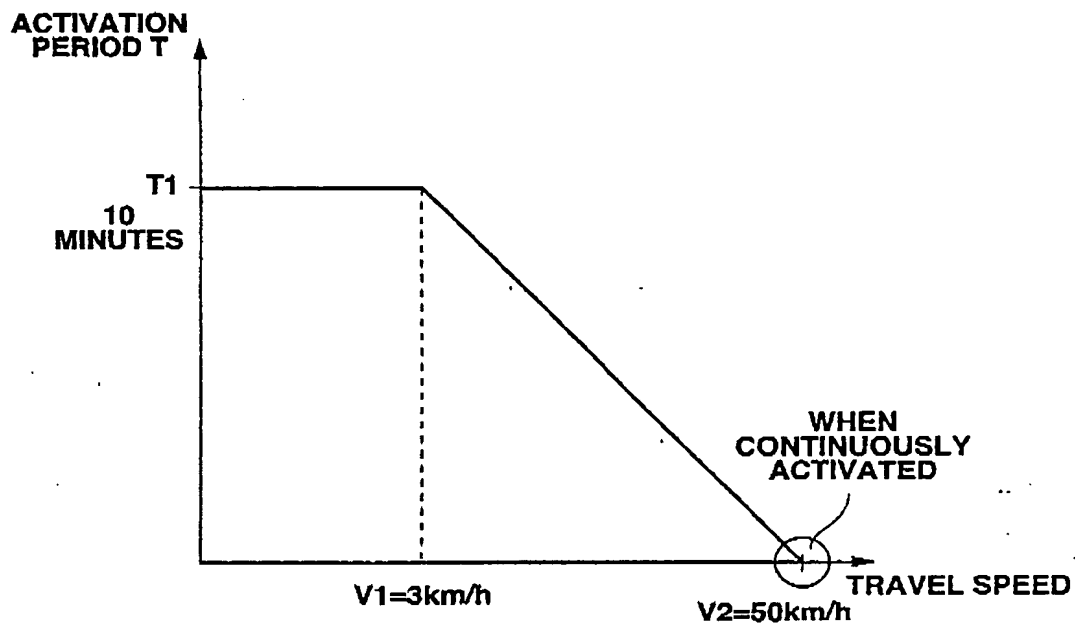


FIG.25

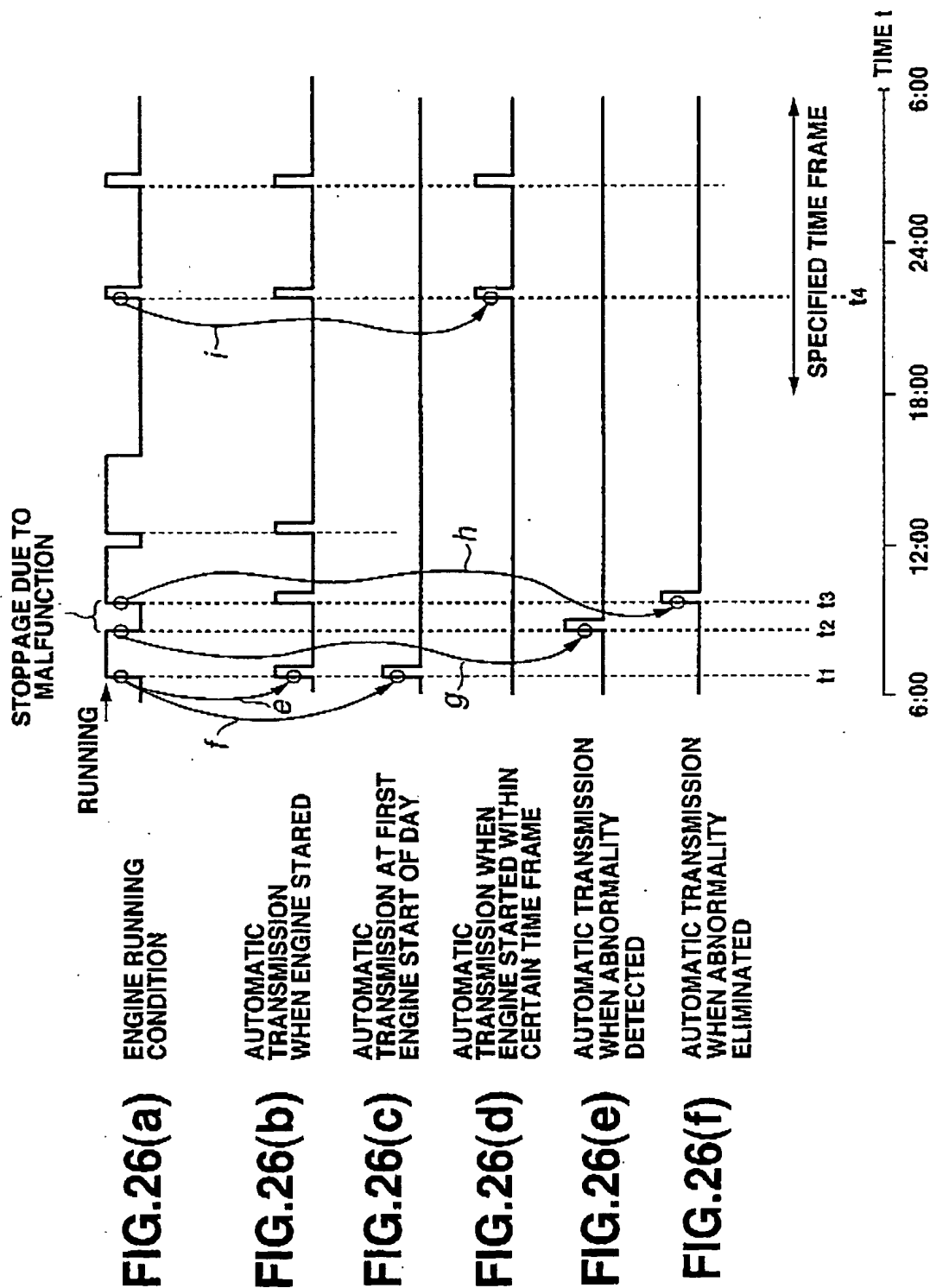




FIG. 27

DATA BY VEHICLE MODEL : LATEST DATA RETURN					
POSITION DATA : HISTORY					
DATE	LATITUDE	LONGITUDE			
98/10/19 3:58:30 P.M.	H35.19.15.240	E139.17.54.210			
SERVICE METER GRAPH					
98/10/19 3:58:30 P.M.					
SPECIFIC DATA					
FUEL QUANTITY	98/09/10 5:06:38 P.M.	90	%	GRAPH	
ENGINE SPEED	98/09/10 5:06:38 P.M.	1340	RPM	GRAPH	
BATTERY VOLTAGE	98/09/10 5:06:38 P.M.	26	V	GRAPH	
PUMP PRESSURE	98/09/10 5:06:38 P.M.	35	kg/cm ²	GRAPH	
WORK MODE	98/09/10 5:06:38 P.M.				
RUNNING MAP	GRAPH				

IMAGE CAPTURED BY CAMERA

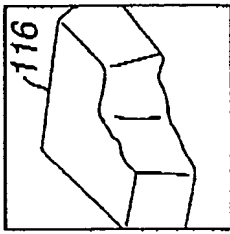


FIG.28

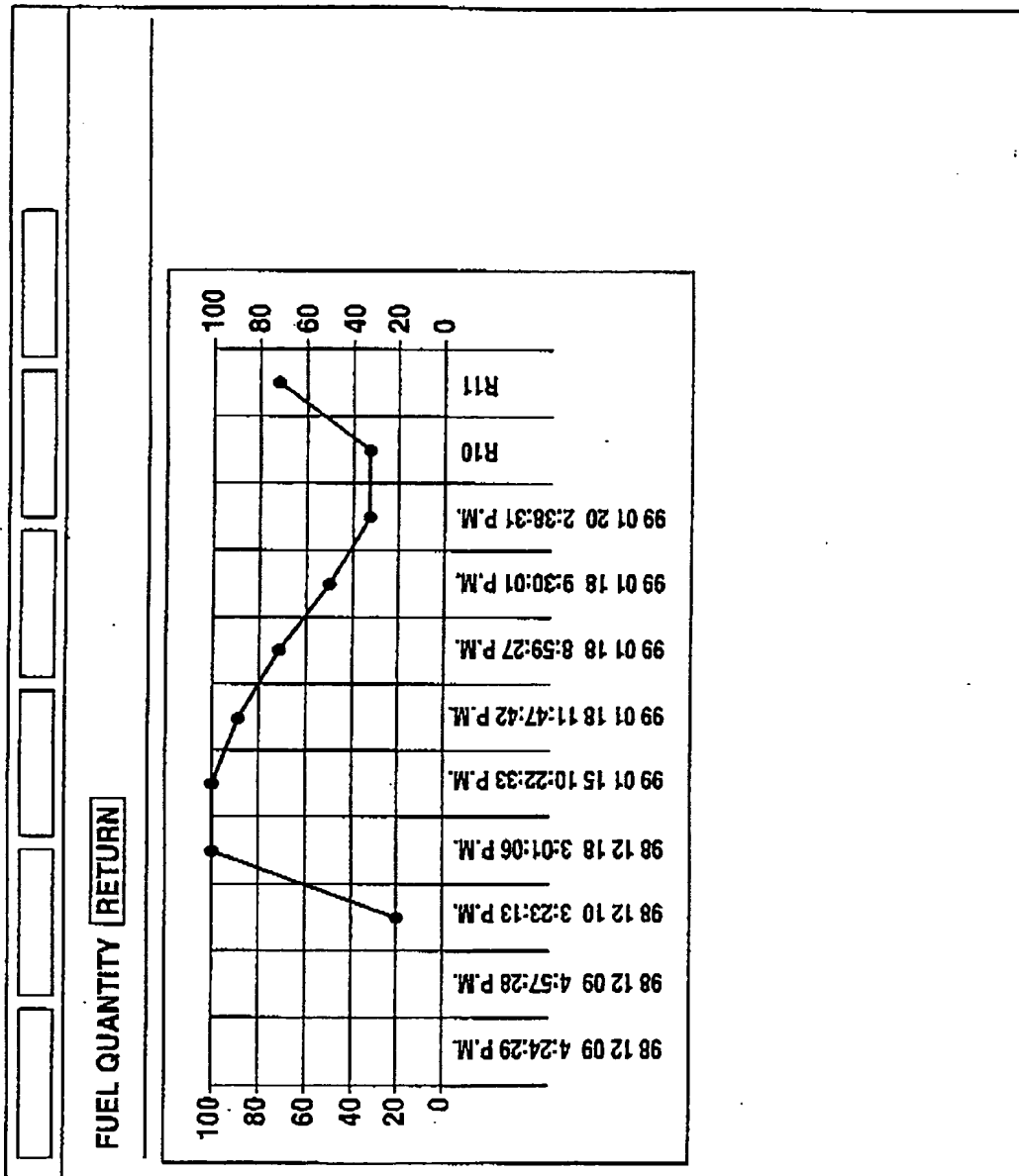


FIG.29

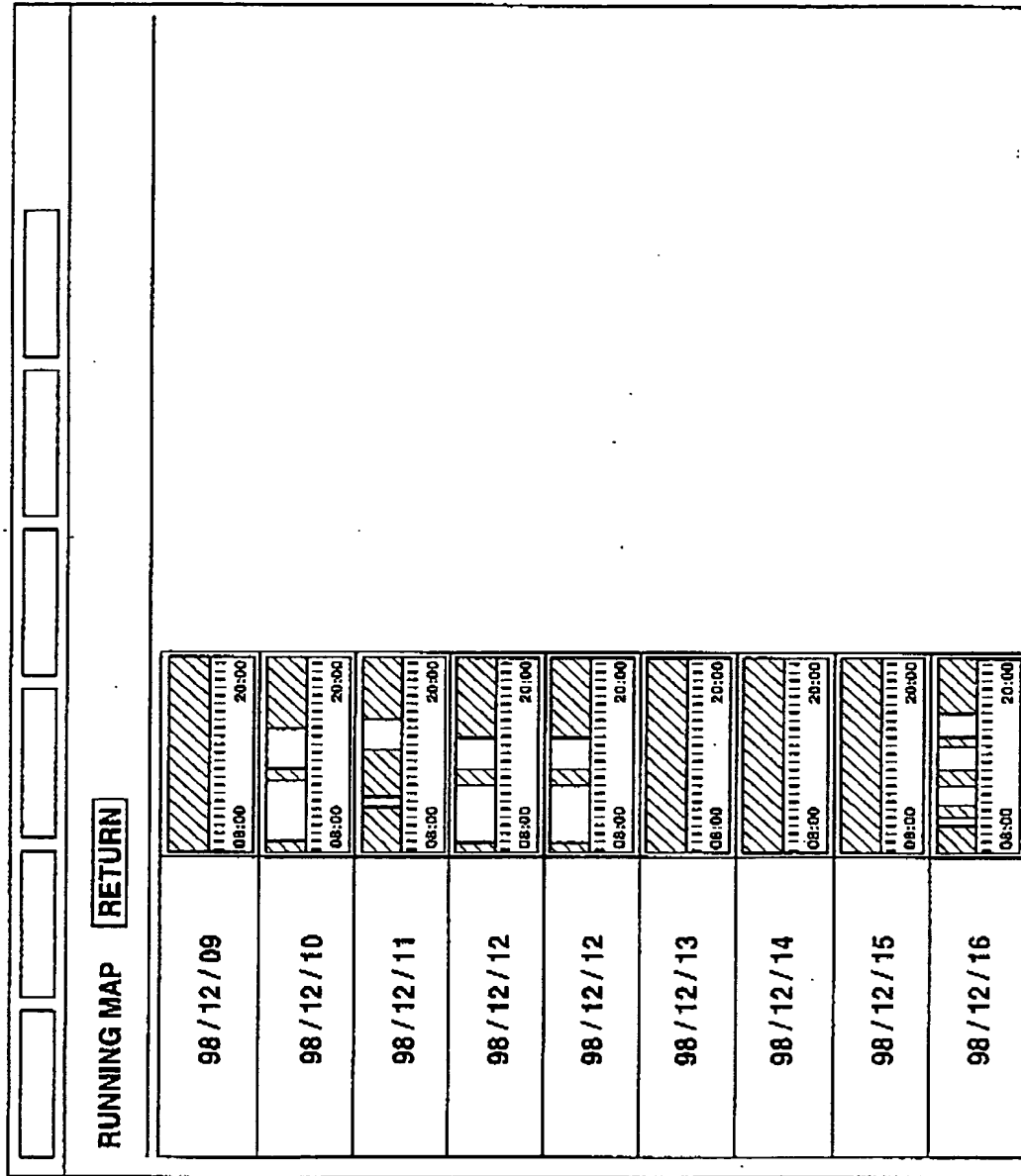


FIG.30

[illegible]

09/936484

CLEAR SELECTIONS		NO.	PURCHASING USER	UTILIZING USER	CAR ID	MANUFACTURER	CONSTRUCTION MACHINE TYPE
	PROCESSING DONE	0	ASAYAMA KENSETSU	ASAYAMA KENSETSU	2		CRANE
	REQUEST IN PROGRESS	1	SUZUKI JUKI	SUZUKI JUK	28		WHEEL LOADER
	REQUEST IN PROGRESS	2	ABE RENTAL	MIZUI DOBOKU	26		SPECIAL
	REQUEST IN PROGRESS	3	ABE RENTAL	MIZUI DOBOKU	25		CRANE
	NORMAL	4	SUZUKI JUKI	SUZUKI JUKI	30		BULLDOZER
	NORMAL	5	HIRAKI SAISEKI	HIRAKI SAISEKI	29		WHEEL LOADER
	NORMAL	6	HQS	BREWERY	20		

FIG. 31

<div>REQUEST EXECUTION</div> <div><div>REQUEST EXECUTION</div><div>CANCEL</div></div> <div>NUMBER OF BYTES CHARGED FOR THIS MONTH <div>1101</div></div> <div>TRANSMISSION BYTES <div>6</div> RECEPTION BYTES <div>6</div> CURRENT BYTE COUNT <div>1089</div></div>		<div>SELECTION OF RECIPIENT OF VEHICLE DATA SENT BACK</div> <table border="1"><tr><td></td><td>REPLY RECIPIENT TERMINAL</td></tr><tr><td></td><td>ADMINISTRATOR A</td></tr><tr><td></td><td>ADMINISTRATOR B</td></tr><tr><td></td><td>SERVICE CAR</td></tr><tr><td></td><td>TRAILER</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>			REPLY RECIPIENT TERMINAL		ADMINISTRATOR A		ADMINISTRATOR B		SERVICE CAR		TRAILER								
	REPLY RECIPIENT TERMINAL																				
	ADMINISTRATOR A																				
	ADMINISTRATOR B																				
	SERVICE CAR																				
	TRAILER																				
<div>BASIC DATA</div> <div><div><input type="checkbox"/> VEHICLE POSITION</div><div><input type="checkbox"/> SERVICE METER</div></div>																					
<div><input type="checkbox"/> SPECIFIC SINGLE METER</div> <div><div><div>ALL ON</div><div>ALL OFF</div></div><table border="1"><tr><td><input type="checkbox"/> FUEL QUANTITY</td></tr><tr><td><input type="checkbox"/> WORK MODE</td></tr><tr><td><input type="checkbox"/> VEHICLE BODY ALARM 1</td></tr><tr><td><input type="checkbox"/> VEHICLE BODY ALARM 2</td></tr><tr><td><input type="checkbox"/> BATTERY VOLTAGE</td></tr><tr><td><input type="checkbox"/> ENGINE WATER TEMPERATURE</td></tr><tr><td><input type="checkbox"/> ENGINE SPEED</td></tr><tr><td><input type="checkbox"/> PUMP PRESSURE</td></tr></table></div>				<input type="checkbox"/> FUEL QUANTITY	<input type="checkbox"/> WORK MODE	<input type="checkbox"/> VEHICLE BODY ALARM 1	<input type="checkbox"/> VEHICLE BODY ALARM 2	<input type="checkbox"/> BATTERY VOLTAGE	<input type="checkbox"/> ENGINE WATER TEMPERATURE	<input type="checkbox"/> ENGINE SPEED	<input type="checkbox"/> PUMP PRESSURE										
<input type="checkbox"/> FUEL QUANTITY																					
<input type="checkbox"/> WORK MODE																					
<input type="checkbox"/> VEHICLE BODY ALARM 1																					
<input type="checkbox"/> VEHICLE BODY ALARM 2																					
<input type="checkbox"/> BATTERY VOLTAGE																					
<input type="checkbox"/> ENGINE WATER TEMPERATURE																					
<input type="checkbox"/> ENGINE SPEED																					
<input type="checkbox"/> PUMP PRESSURE																					

EXAMPLE OF SCREEN FOR MAKING INFORMATION REQUEST TO MOBILES

FIG.32

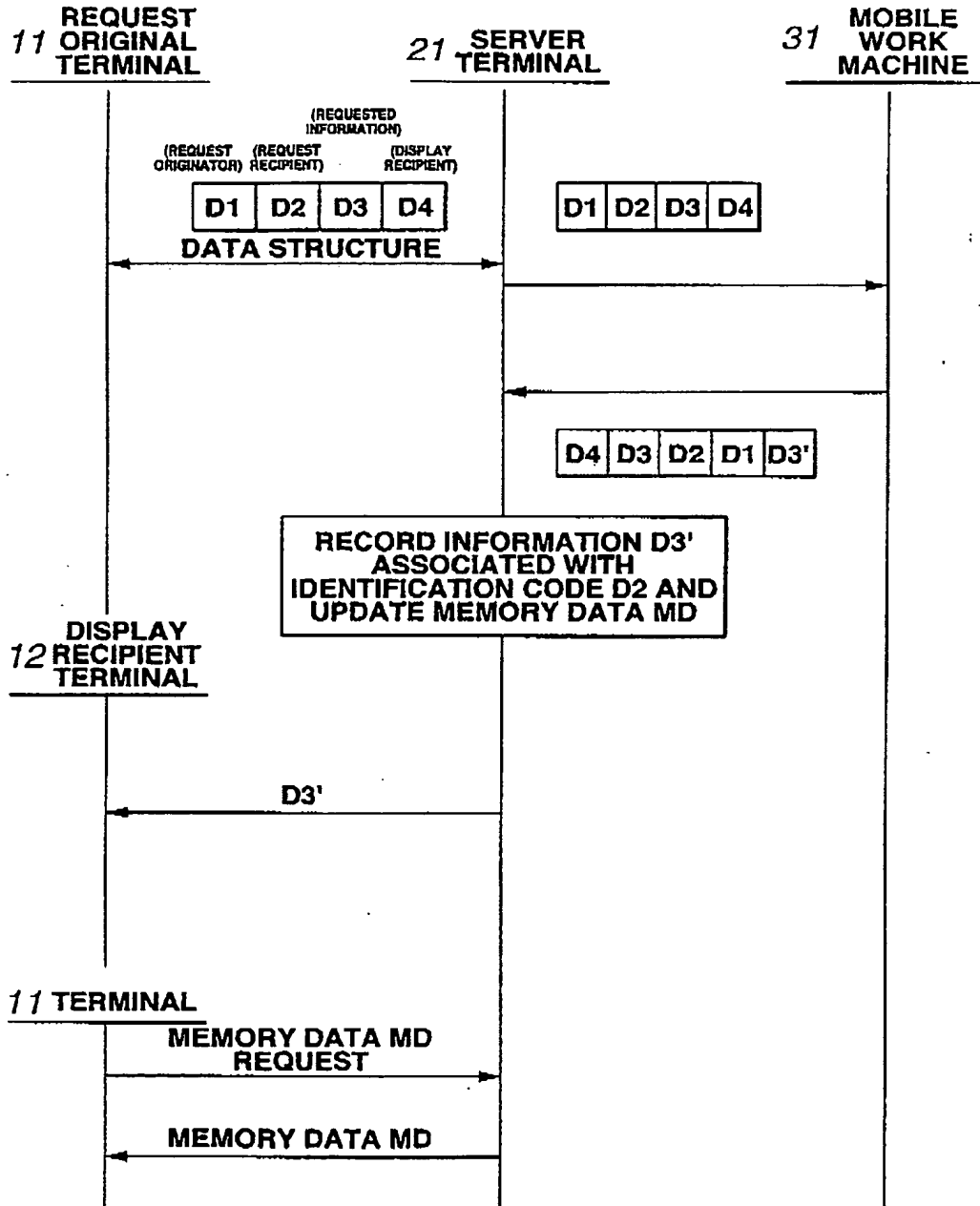


FIG.33

NOTIFICATION SCREEN

There were 7 noticed as of 10:21:31 a.m. on 00/01/31. No.1 to no.7 are displayed.
Previous 20 notices Next 20 notices Page: 1

SET VEHICLE
TO WATCH

WATCH	TIME	MANU. FACTURER	MODEL	MODEL NUMBER	MACHINE NUMBER	ID1	ID2	CONTENT
<input type="checkbox"/>	2000/01/31 08:38	X COMPANY	PC60	7	0251	K623		The lock was set by remote.
<input type="checkbox"/>	2000/01/30 21:14	X COMPANY	PC200	6E	1338	K005		Vehicle engine started outside regular hours.
<input checked="" type="checkbox"/>	2000/01/30 03:20	X COMPANY	PC75UU	3	3007	K108		No confirmation of locking received from vehicle.
<input type="checkbox"/>	2000/01/29 20:28	X COMPANY	PC75UU	3	0011	K008		The battery voltage is low.
<input type="checkbox"/>	2000/01/29 09:57	X COMPANY	PC75UU	3	7789	K315		The vehicle is out of range.
<input type="checkbox"/>	2000/01/29 05:25	X COMPANY	PC200	6E	7633	K311		Vehicle engine started outside regular hours.
<input checked="" type="checkbox"/>	2000/01/28 21:54	X COMPANY	PC75UU	3	5422	K116		No communication with vehicle for 36 hours or more.

ORGANIZE
NOTICES

※ This screen is automatically updated at a certain time interval.

FIG.34

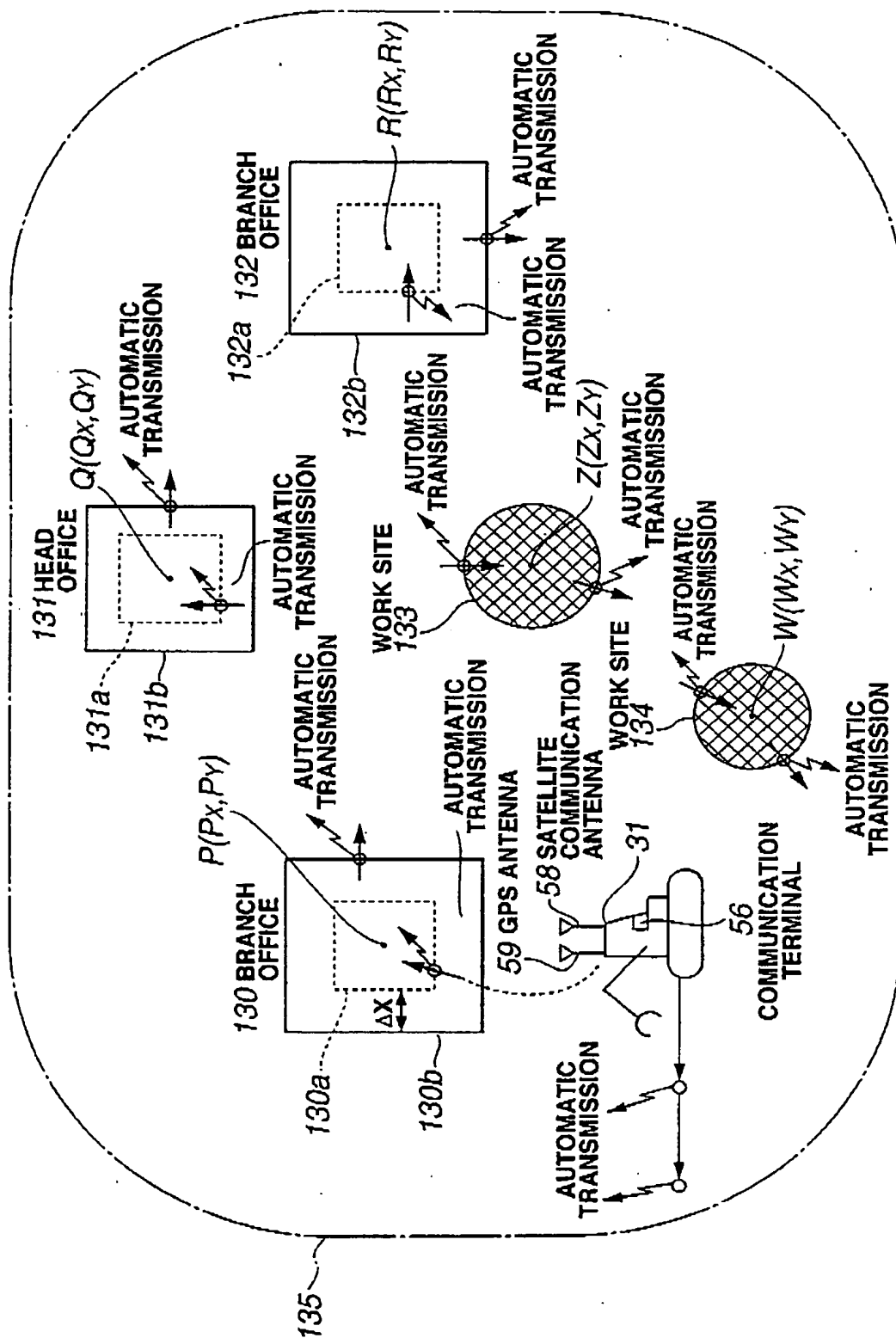


FIG.35

SCREEN OF ENTRY AND LEAVING

LATEST ITEMS FROM NO.1 TO NO.10 DISPLAYED.
PREVIOUS 20 ITEMS NEXT 20 ITEMS PAGE : 1

TIME	PARTICULARS OF ENTRY AND LEAVING
1999/11/15 16:19:00	LEFT SOUTH TOKYO OFFICE.
1999/11/15 15:37:00	ENTERED SHIRAKAWA BRANCH OFFICE.
1999/11/15 13:53:00	LEFT WEST TOKYO OFFICE.
1999/11/12 14:37:00	LOCATED AT WEST TOKYO OFFICE.
1999/11/12 14:17:00	ENTERED WEST TOKYO OFFICE.

FIG.36

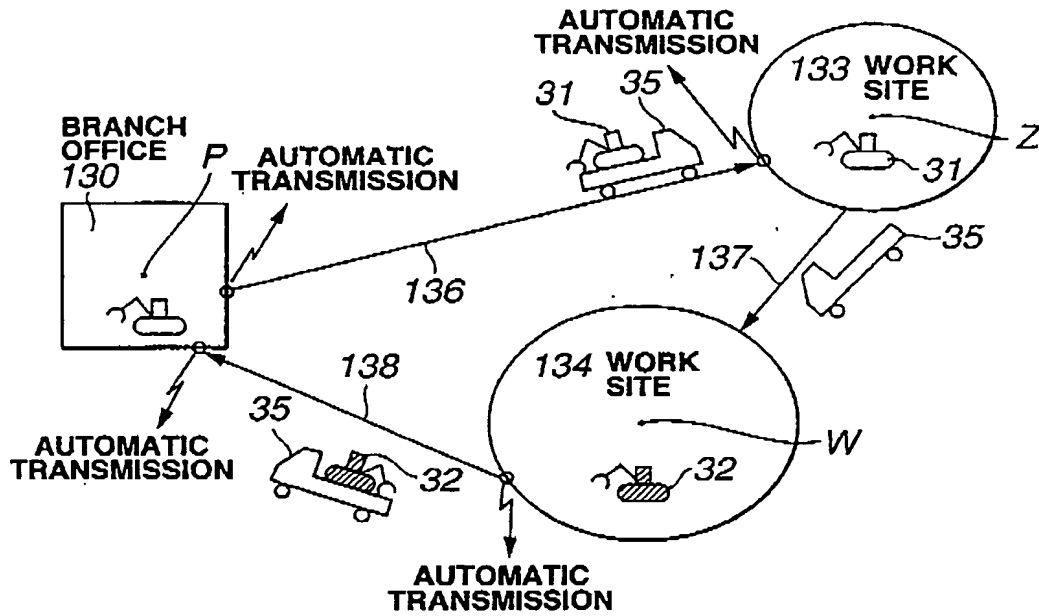


FIG.37(a)

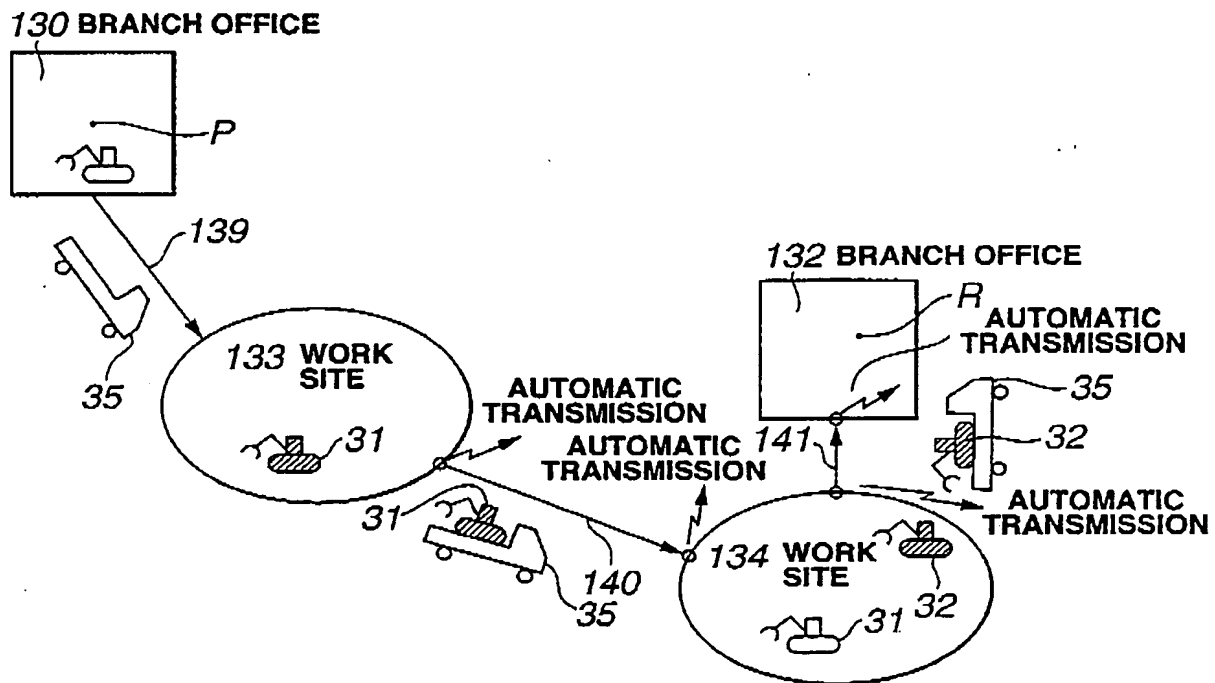


FIG.37(b)

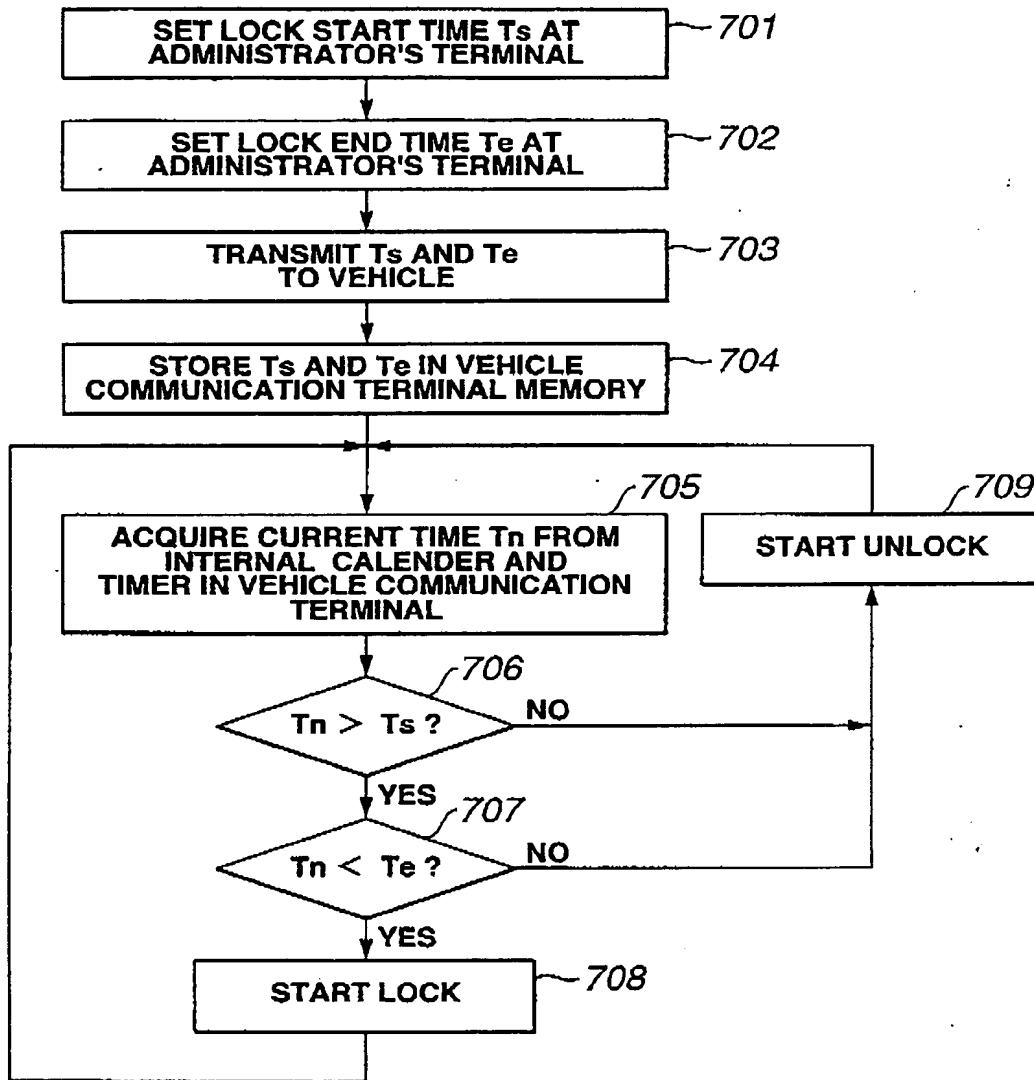


FIG.38

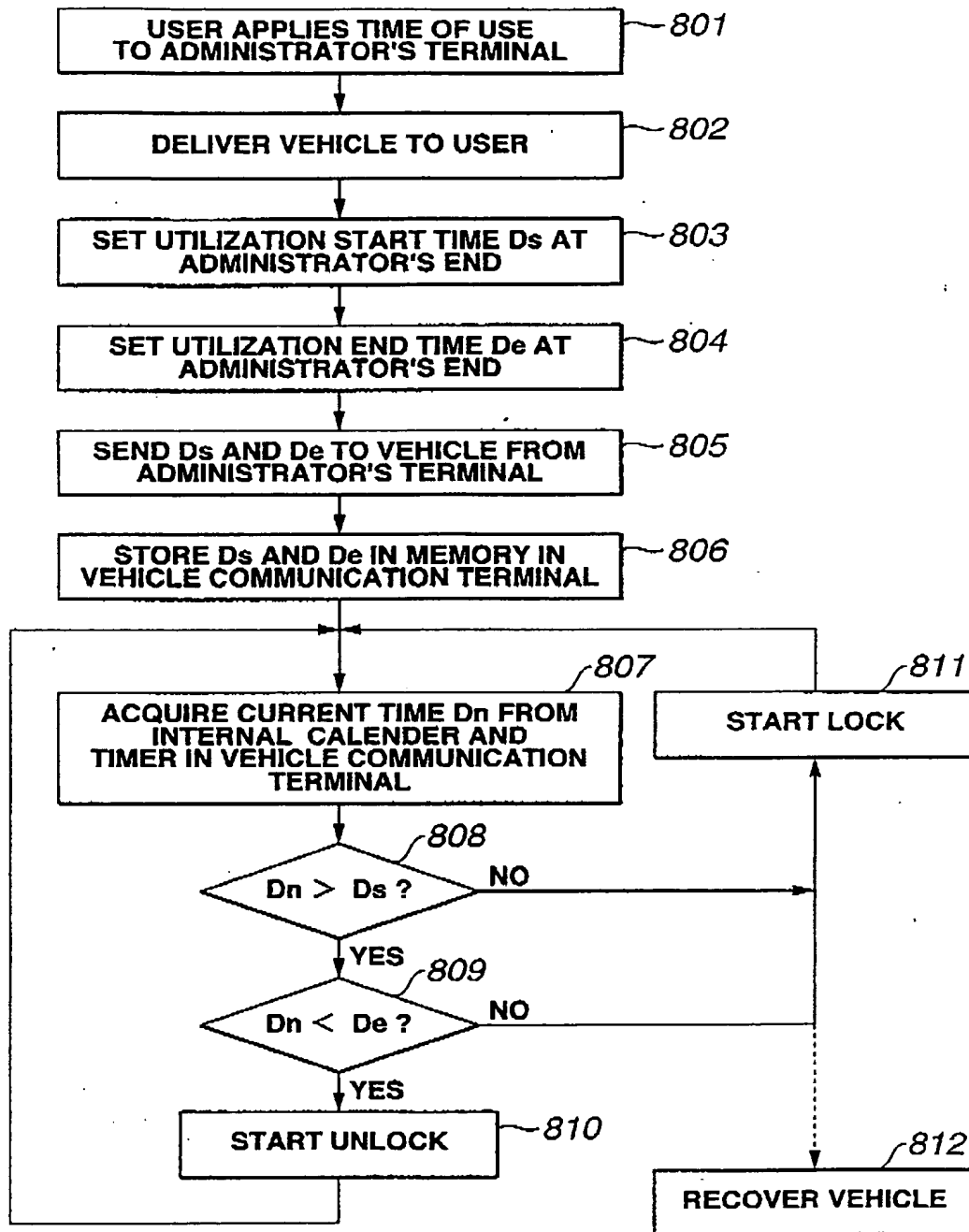


FIG.39

DAILY WORK REPORT SCREEN

ABC DOBOKU (KK)

SITE : IROHA ROCK QUARRY

DATE	RUNNING MAP	RUNNING TIME	NAME OF WORKER	REMARKS
2000/01/30		0 HOUR 0 MINUTE		
2000/01/29		8 HOURS 18 MINUTES	SATOH	LUBE
2000/01/28		8 HOURS 24 MINUTES	SATOH	
2000/01/27		8 HOURS 36 MINUTES	SATOH	
2000/01/26		9 HOURS 12 MINUTES	SUZUKI	
2000/01/25		0 HOUR 54 MINUTES	SUZUKI	
2000/01/24		3 HOURS 12 MINUTES	KATOH	
2000/01/23		0 HOUR 0 MINUTE		
2000/01/22		2 HOURS 54 MINUTES	SATOH	FUEL 2001
2000/01/21		5 HOURS 36 MINUTES	SATOH	

CHARGES : XXXXXXXX YEN (TOTAL 49 HOURS 6 MINUTES)

FIG.40

MANUFACTURER	COMPANY A
MODEL	PC2000
MODEL NUMBER	6E
MACHINE NUMBER	18322
IDENTIFICATION ID1	K274
IDENTIFICATION ID2	
VEHICLE TYPE	POWER SHOVEL
UTILIZATION USER	
CLASSIFICATION 1	UNCLASSIFIED
CLASSIFICATION 2	UNCLASSIFIED
DATE OF RECEIPT OF LATEST MAIL	2000/01/30 23:00:00
COMMUNICATION STATUS	REPLY SENT

09/02/99 14:49:56

484966/60

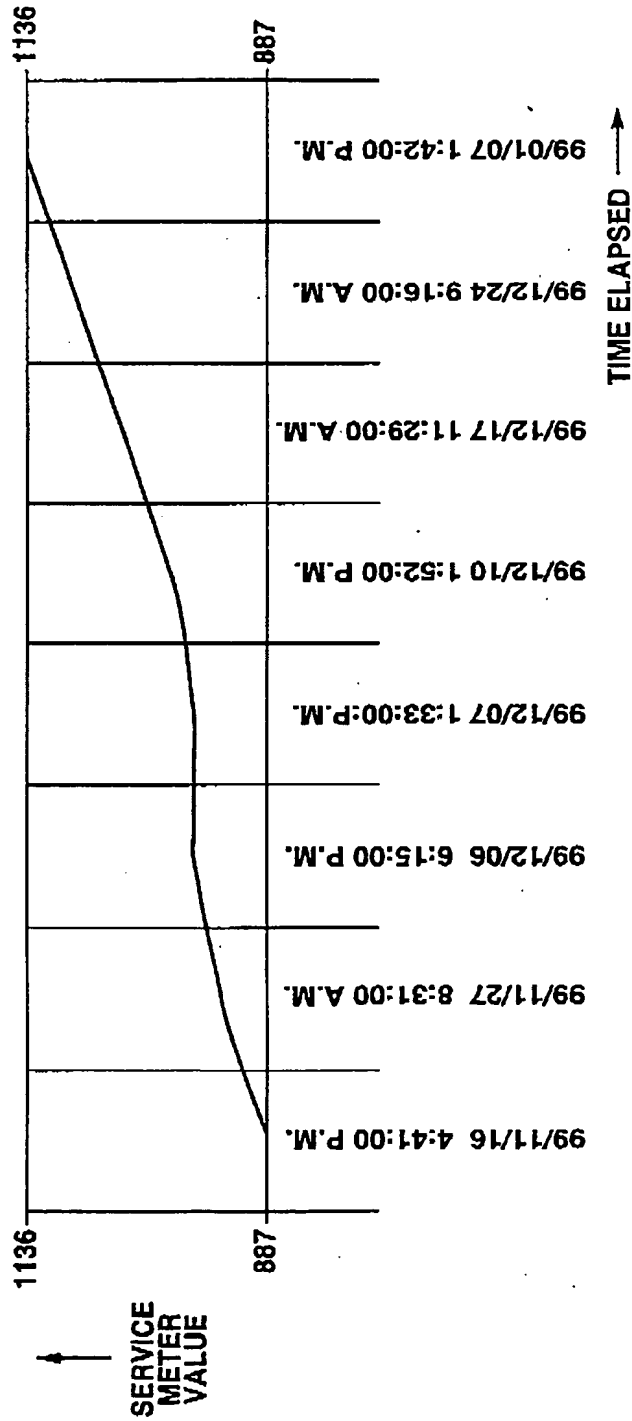


FIG.41